Supplementary materials

Supplemental Table 1. OPA GMT for the two potentially cross-reactive serotypes (6C and 15B) pre- and 30 days post-vaccination, estimated OPA GMT ratios for pre- to 30 days post-vaccination, and the proportions of participants with at least a four-fold rise in OPA GMT at 30 days.

			V116 (N=51)		**PPSV23** (N=51)
Serotype	**Endpoint**	**n**	**Observed response (95% CI[a])**	**n**	**Observed response (95% CI[a])**
6C	GMT (day 1)	51	103.87 (45.06, 239.45)	51	46.51 (22.49, 96.20)
	GMT (day 30)	51	697.66 (320.58, 1518.25)	50	227.33 (107.22, 481.98)
	GMFR (day 1–30)	51	5.63 (3.17, 9.99)	50	4.00 (2.21, 7.24)
	% with 4-fold rise (day 1–30)	51	39.2 (25.8, 53.9)	50	30.0 (17.9, 44.6)
15B	GMT (day 1)	50	76.24 (39.82, 145.98)	49	53.06 (29.64, 94.98)
	GMT (day 30)	51	3049.06 (1903.00, 4885.33)	51	1558.46 (980.82, 2476.29)
	GMFR (day 1–30)	50	35.68 (18.43, 69.08)	49	23.54 (13.35, 41.50)
	% with 4-fold rise (day 1–30)	50	80.0 (66.3, 90.0)	49	75.5 (61.1, 86.7)

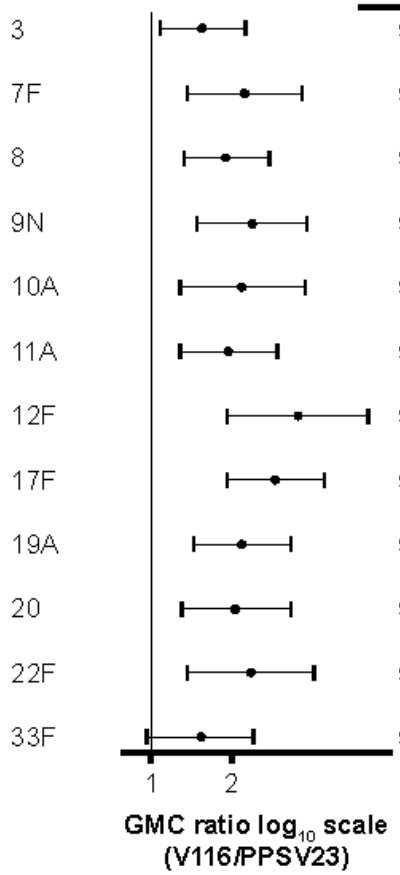
[a]For continuous endpoints, within-group 95% CI were obtained by exponentiating the means of the natural log values based on the t-distribution. For dichotomous endpoints, within-group 95% CI were based on the exact binomial method.

Note: Day 1 is pre-vaccination and day 30 is 30 days post-vaccination

CI: confidence interval; GMFR: geometric mean fold-rise; GMT: geometric mean titer; OPA: opsonophagocytic activity; PPSV23: 23-valent pneumococcal polysaccharide vaccine; V116: 21-valent pneumococcal conjugate vaccine.

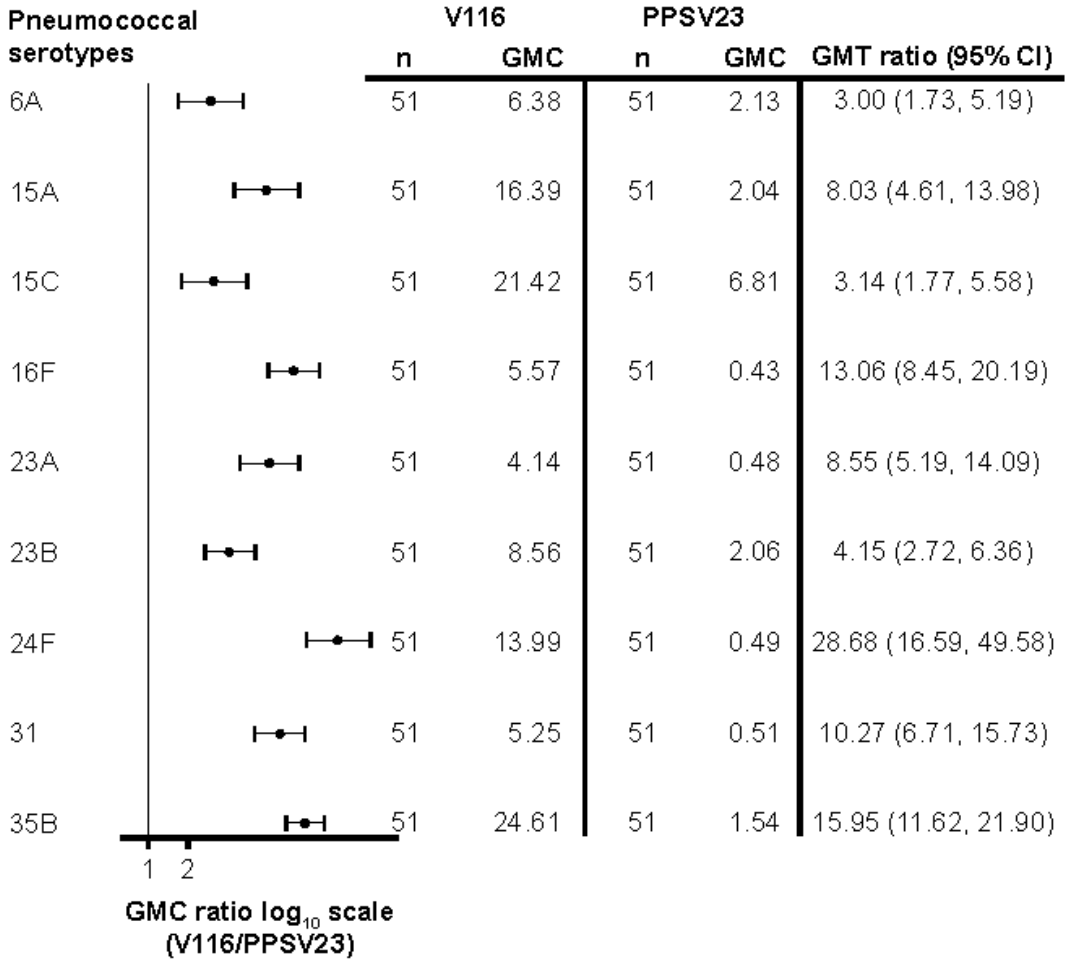
Supplemental Figure 1. IgG GMC and IgG GMC ratios 30 days after vaccination for (a) the 12 serotypes common to V116 and PPSV23 and (b) the nine serotypes unique to V116.

A



Pneumococcal serotypes	V116 n	V116 GMC	PPSV23 n	PPSV23 GMC	GMC ratio (95% CI)
3	51	1.13	51	0.73	1.54 (1.08, 2.21)
7F	51	10.29	51	4.66	2.21 (1.36, 3.60)
8	51	19.38	51	10.33	1.88 (1.32, 2.68)
9N	51	14.17	51	5.99	2.37 (1.49, 3.74)
10A	51	11.13	51	5.16	2.16 (1.28, 3.65)
11A	51	9.07	51	4.71	1.92 (1.28, 2.89)
12F	51	2.87	51	0.82	3.49 (1.94, 6.27)
17F	51	19.46	51	6.77	2.88 (1.92, 4.31)
19A	51	10.75	51	4.97	2.16 (1.45, 3.23)
20	51	23.53	51	11.46	2.05 (1.30, 3.25)
22F	51	3.94	51	1.69	2.33 (1.36, 3.99)
33F	51	22.00	51	14.48	1.52 (0.97, 2.37)

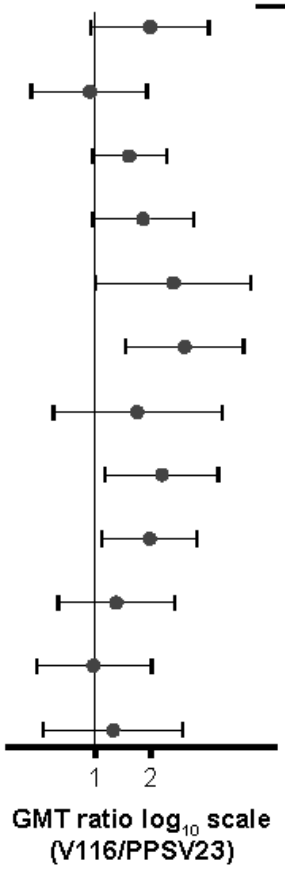
B



CI: confidence interval; GMC: geometric mean concentration; IgG: immunoglobulin G; PPSV23: 23-valent pneumococcal polysaccharide vaccine; V116: 21-valent pneumococcal conjugate vaccine.

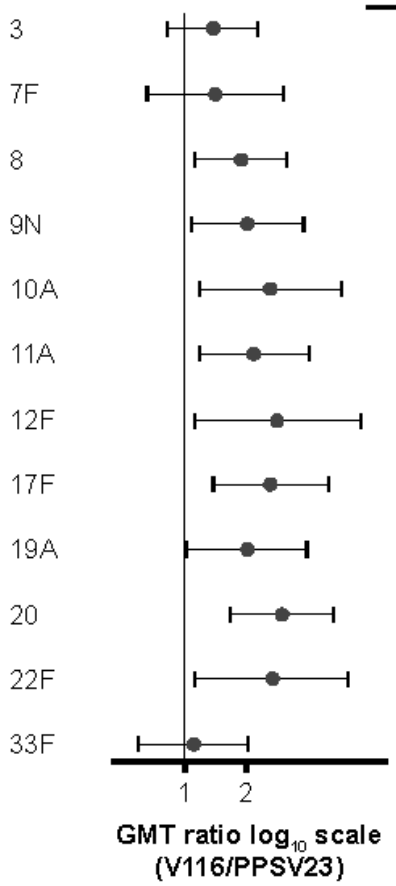
Supplemental Figure 2. Estimated OPA GMT ratios 30 days after vaccination for the 12 serotypes common to V116 and PPSV23 for those 20 to ≤64 (a) and ≥65 years of age (b) and the nine serotypes unique to V116 for those 20 to ≤64 (c) and ≥65 years of age (d).

A



Pneumococcal serotypes	V116 n	V116 GMT	PPSV23 n	PPSV23 GMT	GMT ratio (95% CI)
3	17	237.44	17	119.47	1.99 (0.95, 4.14)
7F	17	6086.00	17	6497.47	0.94 (0.46, 1.90)
8	17	1673.93	17	1083.85	1.54 (0.97, 2.46)
9N	17	10,694.58	17	5835.66	1.83 (0.97, 3.47)
10A	17	5472.29	17	2040.14	2.68 (1.03, 7.01)
11A	17	2438.11	17	790.71	3.08 (1.48, 6.41)
12F	17	2348.10	17	1381.67	1.70 (0.59, 4.88)
17F	17	13,613.92	17	5852.04	2.33 (1.16, 4.65)
19A	17	2300.06	17	1159.05	1.98 (1.11, 3.55)
20	17	4314.74	17	3285.83	1.31 (0.64, 2.71)
22F	17	9621.31	17	9712.30	0.99 (0.49, 2.02)
33F	17	46,622.42	17	37,277.06	1.25 (0.53, 2.95)

B

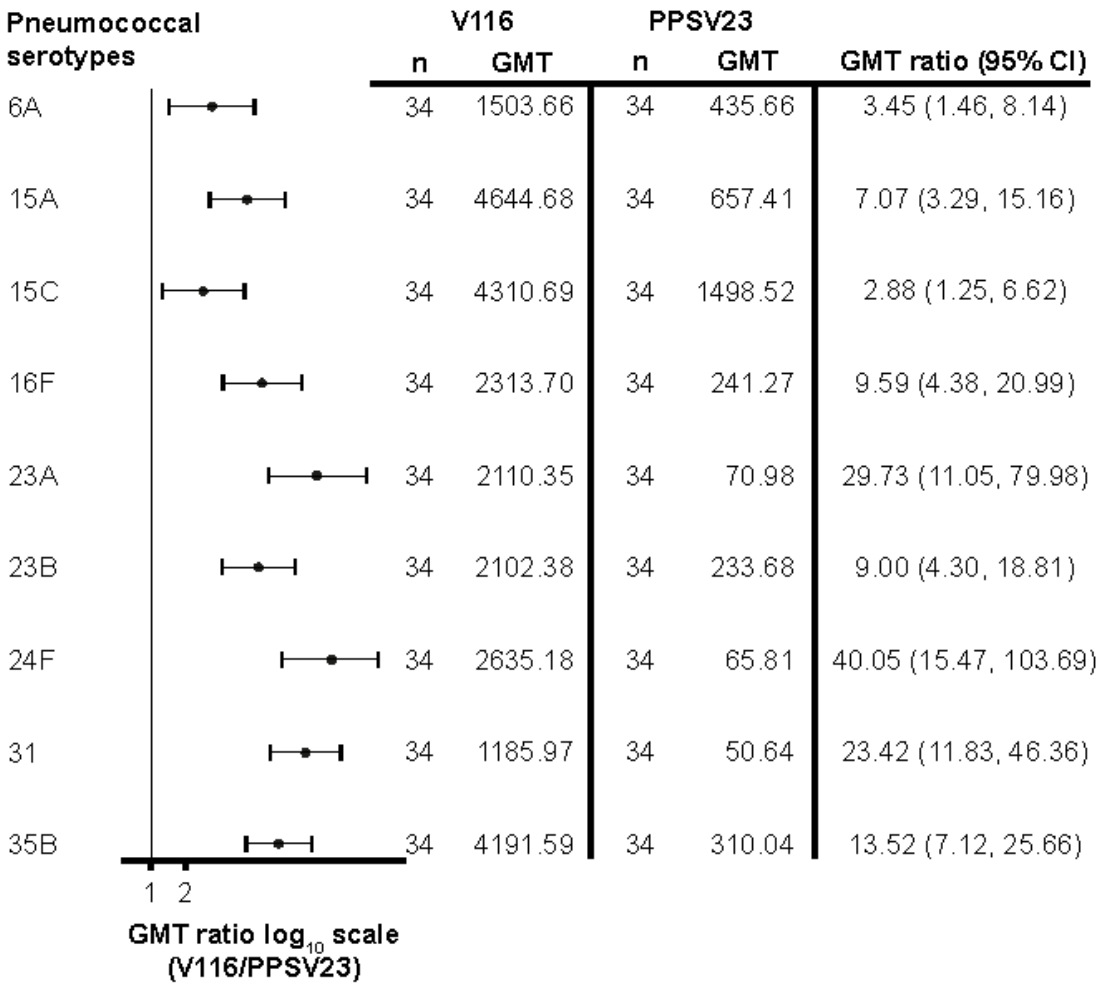


Pneumococcal serotypes	V116 n	V116 GMT	PPSV23 n	PPSV23 GMT	GMT ratio (95% CI)
3	34	130.30	34	94.22	1.38 (0.84, 2.26)
7F	34	5074.05	34	3564.48	1.42 (0.66, 3.07)
8	34	1124.75	34	591.51	1.90 (1.14, 3.17)
9N	34	5297.59	34	2588.88	2.05 (1.09, 3.83)
10A	34	2877.67	34	1091.82	2.64 (1.19, 5.86)
11A	34	1149.66	34	521.57	2.20 (1.19, 4.08)
12F	34	1032.38	34	358.84	2.88 (1.14, 7.29)
17F	34	6635.71	34	2487.46	2.67 (1.39, 5.13)
19A	34	1196.09	34	585.02	2.04 (1.04, 4.00)
20	34	3220.30	34	1065.40	3.02 (1.71, 5.35)
22F	34	4498.36	34	1656.09	2.72 (1.15, 6.42)
33F	34	28,012.83	34	25,344.79	1.11 (0.60, 2.03)

C

Pneumococcal serotypes	V116 n	V116 GMT	PPSV23 n	PPSV23 GMT	GMT ratio (95% CI)
6A	17	1995.35	17	539.01	3.70 (1.32, 10.40)
15A	17	6283.19	17	1142.88	5.50 (2.48, 12.18)
15C	17	2515.71	17	1721.81	1.46 (0.55, 3.89)
16F	17	2781.95	17	250.75	11.09 (3.62, 33.96)
23A	17	4333.66	17	44.65	97.06 (29.79, 316.20)
23B	17	2061.25	17	82.53	24.97 (9.99, 62.46)
24F	17	2594.60	17	341.40	7.60 (2.13, 27.17)
31	17	3484.72	17	113.50	30.70 (10.66, 88.41)
35B	17	5700.27	17	549.83	10.37 (5.54, 19.40)

D



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